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10th International Conference on

## Neuroscience and Neurochemistry

6<sup>th</sup> International Conference on Vascular Dementia

February 27-March 01, 2017

## Predisposing factor for adjacent-segment failure following lumbar fixation for degenerative instability

Mohamed Shaban

Cairo University, Egypt

**Object:** Adjacent-segment failure is a well-known risk of lumbar fixation. The aim of this retrospective study was to identify risk factors for next-segment failure in lumbar fixation for degenerative instability.

**Method:** We retrospectively evaluated 122 patients who underwent of lumbar fixation for degenerative instability from 2011 to 2014 in Faculty of Medicine, Cairo University. All procedures were performed by a single surgeon. The patients with next-segment failure underwent neurological assessment, radiographic studies and sequential follow-up examinations. The mean follow-up period for this group was 30 months.

Results: 33 patients of 122 fusion procedures were performed in women who were postmenopausal. A total of 19 patients of 125 patients developed symptomatic next-segment degeneration at a previously asymptomatic level; 15 were postmenopausal women. All women were postmenopausal, and 50% received bisphosphonate drugs and calcium supplementation preoperatively for osteopenia. 20% of all patients with next-segment failure were cigarette smokers. Next-segment diseases included spondylolisthesis (52%), spinal canal stenosis due to disc herniation and/or facet hypertrophy (33%), stress fracture (12%), and scoliosis (3%). Patients may have more than one degenerative process at the next segment.

**Conclusions:** Postmenopausal women show the highest risk of adjacent-segment failure for patients in whom lumbar fusion with rigid instrumentation is performed to treat degenerative instability.

## **Biography**

Mohamed Shaban is currently working at Cairo University as a special surgeon from the year 2009 to 2017. He has many research works published. This is one of the latest research he submitted to the university.

shabanneuro@gmail.com

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